

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/10846

A. CLASSIFICATION OF SUBJECT MATTER  
Int.Cl<sup>7</sup> C12Q1/68, C12N15/31

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C12Q1/68, C12N15/31

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
JSTPlus(JOIS), SwissProt/PIR/GeneSeq, Genbank/EMBL/DBJ/GeneSeq,  
BIOSIS/WPI (DIALOG), CA(STN)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	JP 2003-047474 A (Nichirei Corp.), 18 February, 2003 (18.02.03), Full text & WO 03/14393 A1	16-36
A	JP 09-252783 A (Nippon Suisan Kaisha, Ltd.), 30 September, 1997 (30.09.97), Full text & WO 97/35970 A1 & EP 965636 A1 & US 6048697 A	1-15
A	Venkateswaran K. et al., Cloning and nucleotide sequence of the gyrB gene of Vibrio parahaemoly- ticus and its application in detection of this pathogen in shrimp, Appl. Environ. Microbiol., 1998, Vol. 64, No. 2, pages 681-7	1-15

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  
26 November, 2003 (26.11.03)

Date of mailing of the international search report  
09 December, 2003 (09.12.03)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 07-213299 A (Marine Biotechnology Institute Co., Ltd.), 15 August, 1995 (15.08.95), Full text (Family: none)	1-15
A	JP 2001-245677 A (SRL, Inc.), 11 September, 2001 (11.09.01), Full text (Family: none)	1-15
A	Yuji KOIZUMI et al., "rpoD Idenshi Hairetsu ni yoru Bunshi Keito Kaiseki ni Motozuita Choen Vibrio Tokui Kenshutsu PCR Primer no Sekkei", Japanese Society of Food Microbiology Gakujutsu Sokai Koen Yoshishu, 2001, 22nd, page 36	16-36
A	JP 08-256798 A (Marine Biotechnology Institute Co., Ltd.), 18 October, 1996 (18.10.96), Full text (Family: none)	16-36
A	Stine O.C. et al., Phylogeny of Vibrio cholerae based on recA sequence, Infect.Immun., 2000, Vol.68, No.12, pages 7180-5	37-50

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## Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:

because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
(See extra sheet.)

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.

☒ No protest accompanied the payment of additional search fees.

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Continuation of Box No.II of continuation of first sheet(1)

The inventions as claimed in claims 1 to 15 relate to a primer containing bases characteristic to *Vibrio vulnificus* strains in a gene encoding DNA gyrase  $\beta$  subunit.

The inventions as claimed in claims 16 to 36 relate to a primer containing bases characteristic to *Vibrio vulnificus* strains in a gene encoding RNA polymerase  $\sigma$  factor.

The inventions as claimed in claims 37 to 50 relate to a primer containing bases characteristic to *Vibrio vulnificus* strains in a gene encoding RecA.

Although the technical feature common to claims 1 to 15, 16 to 36 and 37 to 50 resides in *Vibrio vulnificus* strains, these strains had been publicly known. Therefore, the technical feature common to claims 1 to 15, 16 to 36 and 37 to 50 is not novel.

Accordingly, there is no matter common to all claims.

Since there is no other common matter seemingly being a special technical feature in the meaning within the second sentence of PCT Rule 13.2, no technical relevancy can be found among these groups of inventions different from each other in the meaning within PCT Rule 13.

Such being the case, it is obvious that claims 1 to 15, 16 to 36 and 37 to 50 do not comply with the requirement of unity of invention.